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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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08/879,322 06/20/97 HODGSON

A 14136

WM31/0227

EXAMINER

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ART UNIT	PAPER NUMBER
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2623

*23*

DATE MAILED:

02/27/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

<b>Office Action Summary</b>	Application No. <b>08/879,322</b>	Applicant(s) <b>Hodgson et al</b>
	Examiner <b>Mehrdad Dastouri</b>	Group Art Unit <b>2623</b>

Responsive to communication(s) filed on Feb 13, 2001

This action is **FINAL**.

Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire Three month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

#### Disposition of Claims

Claim(s) 1-20 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

Claim(s) \_\_\_\_\_ is/are allowed.

Claim(s) 1-20 is/are rejected.

Claim(s) \_\_\_\_\_ is/are objected to.

Claims \_\_\_\_\_ are subject to restriction or election requirement.

#### Application Papers

See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

The proposed drawing correction, filed on \_\_\_\_\_ is  approved  disapproved.

The specification is objected to by the Examiner.

The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. § 119

Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

All  Some\*  None of the CERTIFIED copies of the priority documents have been

received.

received in Application No. (Series Code/Serial Number) \_\_\_\_\_

received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

#### Attachment(s)

Notice of References Cited, PTO-892

Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

Interview Summary, PTO-413

Notice of Draftsperson's Patent Drawing Review, PTO-948

Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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## **DETAILED ACTION**

### ***Continued Prosecution Application***

1. The request filed on February 13, 2001 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 08/879,322 is acceptable and a CPA has been established. An action on CPA follows.

### ***Response to Communication Prior to First Office Action in CPA***

2. Applicant's communication prior to First Office Action in CPA filed, February 13, 2001, has been entered and made of record.

### ***Affidavit or Declaration Under 37 CFR 1.131: Ineffective***

3. The supplemental declaration filed on February 13, 2001 under 37 CFR 1.131 has been considered but is ineffective to overcome the Queisser et al reference.

The evidence submitted is insufficient to establish a reduction to practice of the invention in this country or a NAFTA or WTO member country prior to the effective date of the Queisser et al reference. The declaration is ineffective to establish a reduction to practice of the invention in view of Exhibit "F". Exhibit "F" appears to be representative of what Applicants try to claim as their invention. As admitted by Applicants, there is no evidence to indicate that the concept shown in Exhibit "F" were reduced to practice prior to the filing date of Queisser et al reference. Moreover, Exhibit "G" does not add further support to Applicants' contention.

Therefore, the affidavits are not sufficient to overcome the rejection relying on the Queisser et al reference

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4. Applicants' arguments with regards to Claims 1-10 and 12 have been fully considered, but they are not persuasive.

Regarding Claim 1, Applicants argue in essence that the prior art of record (Queisser et al) do not disclose an apparatus or process for measurement of fruit particles in a matrix. The Examiner disagrees and indicates that the sample tray utilized in the invention contains a matrix or a two-dimensional array of food products. Claim language does not specifically defines "a fruit matrix is used as a filling or topping for food products". Furthermore, claim language does not indicate "an aqueous, gelled liquid matrix having fruit particles randomly displaced within this three-dimensional edible product". Prior art of record undoubtedly reads the extremely broad language of the claimed invention. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. *In re Van Gueens*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

#### *Claim Rejections - 35 USC § 102*

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

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6. Claims 1, 3 and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Queisser et al (U.S. 5,818,953).

Regarding Claim 1, Queisser et al disclose an apparatus for measurement of the fruit particles in a matrix comprising:

a substantially opaque cabinet (Figure 1; Column 3, Lines 63-67, Column 4, Lines 1-3); a camera in the upper portion of said cabinet (Figure 1; Column 4, Lines 14-16); a light source in said cabinet (Figure 1; Column 4, Lines 21-22); a sample tray (Figure 1; Column 5, Lines 34-41. Sample tray contains a matrix (or a two-dimensional array) of food products.); and a computer with image analyzing software (Figure 2; Column 4, Lines 27-67, Column 5, Lines 1-11).

Regarding Claim 3, Queisser et al further disclose an apparatus for measurement of the fruit particles in a matrix wherein the light source comprises an incident light source within the cabinet ((Figure 1; Column 4, Lines 21-22).

With regards to Claim 12, arguments analogous to those presented for Claim 1 are applicable to Claim 12. Queisser et al further disclose illuminating the food particles so that an image may be obtained in which food particles are distinguishable from the background (Column 5, Lines 50-65); capturing a computer-readable image of at least a portion of said illuminating fruit particles (Figure 3, Step 70); and using a computer and an image analyzing software program to analyze said image and obtain information concerning said fruit particles (Figures 2 and 3; Column 13, Lines 4-60, Column 14, Lines 1-8).

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***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) a patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable by Queisser et al (U.S. 5,818,953).

Regarding Claim 4, Queisser et al do not specifically disclose the apparatus of Claim 1 wherein the light source comprises switches for adjusting the intensity of the light. Light sources are inherently incorporated with switches for turning the lights on and off. Alternatively, utilizing switches for adjusting the intensity of a light in a predetermined range is extremely well known in the art (Official Notice.). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide an apparatus for measurement of the fruit particles in a matrix wherein the light source comprises switches for adjusting the intensity of the light because it will provide the capability of obtaining different images of samples under various illumination conditions for enhancing image quality and increasing measurement accuracy.

Regarding Claim 5, Queisser et al disclose the apparatus of Claim 1 wherein the light source comprises multiple light-producing sources (Figure 1; Column 5, Lines 52-57). Queisser et al do not explicitly disclose the apparatus of Claim 1 comprising independently-adjustable light-producing sources. Light sources are inherently incorporated with switches for turning the lights

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on and off. Alternatively, utilizing switches for adjusting the intensity of lights in a predetermined range is extremely well known in the art (Official Notice.). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide an apparatus for measurement of the fruit particles in a matrix wherein the light source comprises switches for adjusting the intensity of the light because it will provide the capability of obtaining different images of samples under various illumination conditions for enhancing image quality.

Regarding Claim 6, Queisser et al do not disclose the apparatus of Claim 1 wherein the inside of the cabinet is non-reflecting. Characteristics of the inside surface of a cabinet is the decision based upon designer's preference. Appropriate painting of the inside of a cabinet will result in a non-reflecting surface routinely practiced in the art (Official Notice). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide a cabinet with non-reflecting inside surface because it will minimize light scattering inside the cabinet and will prevent degrading of the image quality due to light scattering.

9. Claims 2, 7-10, 13, 14, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable by Queisser et al (U.S. 5,818,953) in view of Bolle et al (U.S. 5,546,475).

Regarding Claim 2, Queisser et al do not disclose the apparatus of Claim 1 wherein said light source comprises a light box in the lower portion of said cabinet. Bolle et al disclose a produce recognition system wherein the light source comprises a light box in the lower portion of the cabinet (Figure 4; Column 9, Lines 29-50). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide a light box in the lower

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portion of the cabinet to enclose the lighting fixtures because it will protect the lights against undesirable environmental conditions and mechanical damages.

Regarding Claim 7, Queisser et al do not disclose the apparatus of Claim 1 wherein the sample tray comprises a light-transmitting bottom. Bolle et al disclose a sample tray comprising light transmitting bottom (FIG. 4, Transparent support 405; Column 9, Lines 44-46). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide a light transmitting (transparent) tray for supporting fruit particles in a matrix because it will provide adequate illumination for obtaining the image of the fruit particles.

Regarding Claim 8, neither Queisser et al nor Bolle et al disclose the apparatus of Claim 2 wherein said apparatus further comprises a light box cover. Configuration of the internal parts of the cabinets is based upon the discretion of the designer. The cover for an internal component such as a light box is considered one of the basic elements in construction of the cabinets (Official Notice). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide a cabinet with cover for the light box because it will enclose components with distinct functions in separate segments.

Regarding Claim 9, Queisser et al further disclose an apparatus for measurement of the fruit particles in a matrix wherein the apparatus further comprises a sample tray guide (Figure 1; Column 4, Lines 10-14).

With regards to Claim 10, arguments analogous to those presented for Claims 1, 4, 6 and 7 are applicable to Claim 10.

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Regarding Claim 13, Queisser et al do not disclose the process of Claim 12 wherein said illuminating of the fruit particles in a matrix is from below the sample tray, and said illuminating is therethrough in obtaining said image. Bolle et al disclose a produce recognition system wherein illuminating the particles in a matrix is from below the sample tray, and said illuminating is therethrough in obtaining said image (Figure 4, light source 110, transparent support 405; Column 9, Lines 39-51). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Queisser et al invention in accordance with Bolle et al teachings to illuminate the fruit particles in a matrix from below the sample tray, and the illuminating is therethrough in obtaining said image because it is a conventional method of illuminating materials on a translucent support routinely implemented in the art.

Regarding Claim 14, Bolle et al further disclose a produce recognition system wherein the illuminating is from below only (Figure 4, Light 110; Column 9, Lines 29-37. As depicted in Figure 4, illuminating is from below only. The transparent support 405 is not illuminated both from above and from below.).

With regards to Claim 17, arguments analogous to those presented for Claim 13 are applicable to Claim 17.

With regards to Claim 18, arguments analogous to those presented for Claim 14 are applicable to Claim 18.

10. Claims 15 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable by Queisser et al (U.S. 5,818,953) in view of Sistler et al (U.S. 4,975,863).

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Regarding Claim 15, Queisser et al do not disclose the process of Claim 12 wherein the placing occurs spatially between the illuminating location and the capturing location. Sistler et al disclose a system and process for analysis of particles wherein placing a sample tray occurs spatially between the illuminating location and the capturing location (Figure 5. Transparent plate 23 is located between light source 28 and camera 15.). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Queisser et al invention in accordance with Sistler et al teachings to place a sample tray spatially between the illuminating location and the capturing location because it is one of the standard methods of imaging routinely implemented in the art.

With regards to Claim 19, arguments analogous to those presented for Claim 15 are applicable to Claim 19.

11. Claims 16 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable by Queisser et al (U.S. 5,818,953) further in view of Sistler et al (U.S. 4,975,863) and Bolle et al (U.S. 5,546,475).

Regarding Claim 16, neither Queisser et al nor Sistler et al disclose the process of Claim 15 wherein the illuminating has no source which is between the sample tray and the capturing location. Bolle et al disclose a produce recognition system wherein the illuminating has no source which is between the sample tray and the capturing device (Figure 4. As depicted in Figure 4, there is no illuminating source between Camera 120 and Tray 403.). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Queisser et al

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and Sistler et al combination in accordance with Bolle et al teachings to consider no illuminating source which is between the sample tray and the capturing device because it will simplify illumination system.

With regards to Claim 20, arguments analogous to those presented for Claim 16 are applicable to Claim 20.

12. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable by Heck et al (U.S. 5,845,002) in view of Sistler et al (U.S. 4,975,863).

Regarding Claim 1, Heck et al disclose an apparatus for measurement of the fruit particles comprising:

a substantially opaque cabinet (Figures 1 and 2a, optic housing 16; Column 7, Lines 65-67); a camera in the upper portion of said cabinet (Figures 1 and 2a, camera 30; Column 8, Lines 53-57); a light source in said cabinet (Figures 1 and 2a, light sources 22 and 24; Column 8, Lines 16-20); a device for holding the fruit (Figures 1 and 2a, inspection station 18; Column 7, Lines 65-67); and a computer with image analyzing software (Figure 1, computer 34; Column 9, Lines 6-21). Heck et al does not specifically disclose a sample tray for supporting fruit particles in a matrix. Sistler et al disclose a particle examination system comprising a sample tray for supporting fruit particles in a matrix (Figure 5, sample tray 23). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Heck et al invention according to the teachings of Sistler et al to include a sample tray for supporting fruit

particles in the measurement cabinet because it is a conventional component utilized for holding the particles in order to perform the desired measurements, and further provides the advantage of allowing the food particles to be easily carried or transported.

Regarding Claim 2, Heck et al further disclose the apparatus of Claim 1 wherein said light source comprises a light box in the lower portion of said cabinet (Figures 1 and 2a, light sources 22 and 24).

Regarding Claim 3, Heck et al further disclose an apparatus for measurement of the fruit particles wherein the light source comprises an incident light source within the cabinet (Figure 2a, light sources 22 and 24).

Regarding Claim 4, Heck et al disclose the concept of varying light intensity upon the fruit (Column 8, Line 49). Neither Heck et al nor Sistler et al specifically disclose the apparatus of Claim 1 wherein the light source comprises switches for adjusting the intensity of the light. Light sources are inherently incorporated with switches for turning the lights on and off. Alternatively, utilizing switches for adjusting the intensity of a light in a predetermined range is extremely well known in the art (Official Notice.). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide an apparatus for measurement of the fruit particles in a matrix wherein the light source comprises switches for adjusting the intensity of the light because it will provide the capability of obtaining different images of samples under various illumination conditions for enhancing image quality and increasing measurement accuracy.

Regarding Claim 5, Heck et al disclose the apparatus of Claim 1 wherein the light source comprises multiple light-producing sources (Figure 2a, light sources 22 and 24). Neither Heck et al nor Sistler et al explicitly disclose the apparatus of Claim 1 comprising independently-adjustable light-producing sources. Light sources are inherently incorporated with switches for turning the lights on and off. Alternatively, utilizing switches for adjusting the intensity of lights in a predetermined range is extremely well known in the art (Official Notice.). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide an apparatus for measurement of the fruit particles in a matrix wherein the light source comprises switches for adjusting the intensity of the light because it will provide the capability of obtaining different images of samples under various illumination conditions for enhancing image quality and increasing measurement accuracy.

Regarding Claim 6, Heck et al teach the concept of using flat black nonreflecting surfaces to overcome the problem of spurious images (Column 8, Lines 47-48). Neither Heck et al nor Sistler et al specifically disclose the apparatus of Claim 1 wherein the inside of the cabinet is non-reflecting. Characteristics of the inside surface of a cabinet is the decision based upon designer's preference and requirements for a given application. Appropriate painting of the inside of a cabinet will result in a non-reflecting surface routinely practiced in the art (Official Notice). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide a cabinet with non-reflecting inside surface because it will minimize light

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scattering inside the cabinet and will prevent degrading of the image quality due to light scattering.

Regarding Claim 7, Sistler et al further disclose the apparatus of Claim 1 wherein the sample tray comprises a light-transmitting bottom (Column 6, Lines 2-8).

Regarding Claim 8, neither Heck et al nor Sistler et al disclose the apparatus of Claim 2 wherein said apparatus further comprises a light box cover. Configuration of the internal parts of the cabinets is based upon the discretion of the designer. The cover for an internal component such as a light box is considered one of the basic elements in construction of the cabinets (Official Notice). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide a cabinet with cover for the light box because it will enclose components with distinct functions in separate segments.

Regarding Claim 9, neither Heck et al nor Sistler et al disclose an apparatus for measurement of the fruit particles wherein the apparatus further comprises a sample tray guide. Configuration of the internal parts of the cabinets is based upon the discretion of the designer. Conventionally, cabinets are manufactured of modular parts. A cover with guides for installation of another component like a tray is considered one of the normal elements in composite modular structure of the cabinets, and has been frequently installed in food preservation and refrigeration cabinets (Official Notice). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide a cabinet with a sample tray guide because it is the conventional part for the installation of the removable components.

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With regards to Claim 10, arguments analogous to those presented for Claims 1, 4, 6 and 7 are applicable to Claim 10.

With regards to Claim 12, arguments analogous to those presented for Claim 1 are applicable to Claim 12. Sistler et al further disclose illuminating the food particles so that an image may be obtained in which food particles are distinguishable from the background (Column 3, Lines 16-22); capturing a computer-readable image of at least a portion of said illuminating fruit particles (Figure 1; Column 3, Lines 23-36); and using a computer and an image analyzing software program to analyze said image and obtain information concerning said fruit particles (Figure 1; Column 3, Lines 37-49).

Regarding Claim 13, Sistler et al further disclose the process of Claim 12 wherein said illuminating of the fruit particles in a matrix is from below the sample tray, and said illuminating is therethrough in obtaining said image (Figure 5; Column 6, Lines 2-8).

Regarding Claim 14, Heck et al further disclose the process of Claim 13 wherein the illuminating is from below only (Figure 2a, Lights 22 and 24. As depicted in Figure 2a, illuminating is from below only.).

Regarding Claim 15, Sistler et al disclose the process of Claim 12 wherein the placing occurs spatially between the illuminating location and the capturing location (Figure 5. Transparent plate 23 is located between light source 28 and camera 15.).

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Regarding Claim 16, Heck et al further disclose the process of Claim 15 wherein the illuminating has no source which is between the sample tray and the capturing location (Figure 2a. There is no source between camera 30 and station 18 which is utilized as a supporting tray.).

With regards to Claim 17, arguments analogous to those presented for Claim 13 are applicable to Claim 17.

With regards to Claim 18, arguments analogous to those presented for Claim 14 are applicable to Claim 18.

With regards to Claim 19, arguments analogous to those presented for Claim 15 are applicable to Claim 19.

With regards to Claim 20, arguments analogous to those presented for Claim 16 are applicable to Claim 20.

***Contact Information***

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mehrdad Dastouri whose telephone number is (703) 305-2438.

The examiner can normally be reached on Monday through Friday from 8:00 a.m. to 4:30 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au, can be reached at (703)308-6604.

**Any response to this action should be mailed to:**

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**or faxed to:**

(703) 308-9051, or (703) 308-9052 (for *formal* communications; please mark  
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**or:**

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"PROPOSED" or "DRAFT")

**Hand delivered responses** should be brought to Crystal Park II, 2121 Crystal Drive,  
Arlington, VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application should be directed to  
the Group Receptionist whose telephone number is (703)305-3900.

*MD*

Mehrdad Dastouri  
Patent Examiner  
Group Art Unit 2623  
February 26, 2001

*Jon Chang*  
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Primary Examiner